## ABSTRACT

A penem derivative represented by the following formula (I):

$$\begin{array}{c|c}
OH \\
\hline
S \\
RI \\
CO_2R_2
\end{array}$$
(1)

wherein  $R_1$  represents a substituted or unsubstituted alkyl group, a substituted or unsubstituted alkenyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted alkylthio group, a substituted or unsubstituted alkenylthio group, a substituted or unsubstituted aralkylthio group, a substituted or unsubstituted aralkylthio group, a substituted or unsubstituted arylthio group, a substituted or unsubstituted heterocyclic group, a substituted or unsubstituted heterocyclic thio group, a substituted or unsubstituted acylthio group, a mercapto group or a hydrogen atom, and  $R_2$  represents a hydrogen atom or a carboxyl-protecting group; or a pharmacologically acceptable salt thereof.

10

15

20

The compound (I) exhibits strong antibacterial activities, and especially, shows strong activities against MRSA. It is therefore useful not only as a

general antibacterial agent but also as an antibacterial agent for MRSA against which no general antibacterial agents are recognized to be effective.

1.